

CLAIMS

1. A decorative wood composite product, comprising:
a wood composite product having a face layer comprising wood pieces bonded together with a thermosetting resin containing a surfactant; and
a decorative overlay affixed to the face layer.
2. The decorative wood composite product of claim 1 wherein the thermosetting resin is selected from the group consisting of an amino resin, a phenolic resin, and mixtures thereof.
3. The decorative wood composite product of claim 2 wherein the thermosetting resin is an amino resin and the amino resin is selected from the group consisting of a melamine-formaldehyde resin, a urea-formaldehyde resin, and mixtures thereof.
4. The decorative wood composite product of claim 2 wherein the thermosetting resin is a phenolic resin and the phenolic resin is selected from the group consisting of a phenol-formaldehyde resin, a phenol-acetaldehyde resin, a resorcinol-formaldehyde resin, a phenol-furfural resin, and mixtures thereof.
5. The decorative wood composite product of claim 4 wherein the phenolic resin is a phenol-formaldehyde resin and the phenol-formaldehyde resin is a phenolic resole resin.
6. The decorative wood composite product of claim 1 wherein the surfactant is an aliphatic hydrocarbon comprising at least 6 carbon atoms.
7. The decorative wood composite product of claim 6 wherein the aliphatic hydrocarbon is an alcohol.
8. The decorative wood composite product of claim 7 wherein the alcohol is cetyl alcohol.

9. The decorative wood composite product of claim 6 wherein the aliphatic hydrocarbon is a fatty acid.
10. The decorative wood composite product of claim 6 wherein the aliphatic hydrocarbon comprises a tall oil fatty acid.
11. The decorative wood composite product of claim 1 wherein the surfactant is selected from the group consisting of oleic acid, acetylated sucrose diester, ethylene glycol distearate, an acetylated monoglyceride, sorbitan trioleate, glycol dioleate and mixtures thereof.
12. The decorative wood composite product of claim 6 wherein the surfactant further comprises an amine.
13. The decorative wood composite product of claim 12 wherein the amine is a volatile amine.
14. The decorative wood composite product of claim 12 wherein the amine is triethylamine.
15. The decorative wood composite product of claim 1 wherein the surfactant comprises an amine and an acidic aliphatic hydrocarbon, wherein the amine and the acidic aliphatic hydrocarbon are present in a molar ratio of about 0.5 to about 1.5.
16. The decorative wood composite product of claim 15 wherein the molar ratio is about 1:1.
17. The decorative wood composite product of claim 1 wherein the surfactant comprises an amine and a fatty acid, wherein the amine and the fatty acid are present in a molar ratio of about 0.5 to about 1.5.
18. The decorative wood composite product of claim 17 wherein molar ratio is about 1:1.
19. The decorative wood composite product of claim 1 wherein the surfactant comprises triethylamine and a tall oil fatty acid.

20. The decorative wood composite product of claim 19 wherein the triethylamine and the tall oil fatty acid are present in an equivalent weight ratio of about 0.5 to about 1.5.
21. The decorative wood composite product of claim 20 wherein the equivalent weight ratio is about 1:1.
22. The decorative wood composite product of claim 1 wherein the decorative overlay is a paper.
23. The decorative wood composite product of claim 22 wherein the paper is a melamine resin-saturated paper.
24. The decorative wood composite product of claim 1 wherein the decorative overlay is a fabric.
25. The decorative wood composite product of claim 1 wherein the decorative overlay is a metal foil.
26. The decorative wood composite product of claim 1 wherein the decorative overlay is a polyester film.
27. The decorative wood composite product of claim 26 wherein the polyester film is mylar.
28. In a method of making a decorative wood composite product, wherein the decorative wood composite product comprises a face layer and a decorative overlay, the improvement comprising:
bonding wood pieces in the face layer together with a thermosetting resin containing a surfactant.
29. The method of claim 28 wherein the thermosetting resin is selected from the group consisting of an amino resin, a phenolic resin, and mixtures thereof.

30. The method of claim 29 wherein the thermosetting resin is an amino resin and the amino resin is selected from the group consisting of a melamine-formaldehyde resin, a urea-formaldehyde resin, and mixtures thereof.
31. The method of claim 29 wherein the thermosetting resin is a phenolic resin and the phenolic resin is selected from the group consisting of a phenol-formaldehyde resin, a phenol-acetaldehyde resin, a resorcinol-formaldehyde resin, a phenol-furfural resin, and mixtures thereof.
32. The method of claim 31 wherein the phenolic resin is a phenol-formaldehyde resin and the phenol-formaldehyde resin is a phenolic resole resin.
33. The method of claim 28 wherein the surfactant is an aliphatic hydrocarbon comprising at least 6 carbon atoms.
34. The method of claim 33 wherein the aliphatic hydrocarbon is an alcohol.
35. The method of claim 34 wherein the alcohol is cetyl alcohol.
36. The method of claim 33 wherein the aliphatic hydrocarbon is a fatty acid.
37. The method of claim 33 wherein the aliphatic hydrocarbon comprises a tall oil fatty acid.
38. The method of claim 28 wherein the surfactant is selected from the group consisting of oleic acid, acetylated sucrose diester, ethylene glycol distearate, an acetylated monoglyceride, sorbitan trioleate, glycol dioleate and mixtures thereof.
39. The method of claim 33 wherein the surfactant further comprises an amine.
40. The method of claim 39 wherein the amine is a volatile amine.
41. The method of claim 39 wherein the amine is triethylamine.

42. The method of claim 28 wherein the surfactant comprises an amine and a fatty acid, wherein the amine and the fatty acid are present in a molar ratio of about 0.5 to about 1.5.
43. The method of claim 41 wherein the molar ratio is about 1:1.
44. The method of claim 28 wherein the surfactant comprises triethylamine and a tall oil fatty acid.
45. The method of claim 44 wherein the triethylamine and the tall oil fatty acid are present in an equivalent weight ratio of about 0.5 to about 1.5.
46. The method of claim 45 wherein the equivalent weight ratio is about 1:1.
47. The method of claim 28 wherein the decorative overlay is a paper.
48. The method of claim 47 wherein the paper is a melamine resin-saturated paper.
49. The method of claim 28 wherein the decorative overlay is a fabric.
50. The method of claim 28 wherein the decorative overlay is a metal foil.
51. The method of claim 28 wherein the decorative overlay is a polyester film.
52. The method of claim 51 wherein the polyester film is mylar.
53. An adhesive composition suitable for bonding wood pieces together, comprising:
 - a thermosetting resin,
 - an amine; and
 - a tall oil fatty acid.
54. The adhesive composition of claim 53 wherein the amine is a volatile amine.
55. The adhesive composition of claim 53 wherein the amine is triethylamine.
56. The adhesive composition of claim 53 wherein the amine and the tall oil fatty acid are present in an equivalent weight ratio of about 0.5 to about 1.5.

57. The adhesive composition of claim 56 wherein the equivalent weight ratio is about 1:1.
58. An adhesive composition comprising:
- a thermosetting resin;
 - a tall oil fatty acid; and
 - triethylamine in an equivalent weight ratio of about 1:1 with the tall oil fatty acid.